



Project: Bank Marketing (Campaign)

Week 7 deliverables

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Internship Batch: LISUM13: 30

Submission date: 21st October 2022

Deliverable contents:

- 1) Problem description
- 2) Business understanding
- 3) Project lifecycle along with deadline
- 4) Data intake report
- 5) Git-hub Repo link

Problem description

Provide ABC bank with a model that enables them to target costumers who're more probable to invest in their new term deposit product.

Business understanding

As ABC launches their new term deposit product, they need their outreach teams to effectively market the product to costumers whose interactions with the bank (loans, responsiveness to offers, etc) as well as their personal standing (job stability, marital status, age, etc) show high possibility of purchasing the deposit product. The need to focus on those costumers is -at the heart of it- the bank's strategy to effectively use the marketing team's resources to spread the deposit product among interested customers.

Deposit products promise costumers a high interest rate in return to locking an amount of their money for some time. Many factors decide whether a costumer invest in such product or not. The most important is his standing in life in general. For instance, customers who have savings beyond their day-to-day spending and have sitting-money would seemingly fit the profile of a perfect costumer. If a costumer's age is 60+, he's not a very good fit since he has limited resources and is retired, hence has no income except his pension which might not offer any excess to invest in this product. Customers who are used to taking loans could benefit as well if the interest rate from their savings covers their installments to the bank. Jobs play an important role as well in defining whether a costumer is a good fit. Doctors, engineers and similar prestigious jobs that are known to pay well are good candidates, as well as individuals with a long-standing job; 20+ work in a certain company shows stability.

Project lifecycle along with deadline

Week	Deadline	Milestone
07	19 th October	Problem definition
08	26 th October	Data inspection
09	2 nd November	Data cleaning and transformation
10	9 th November	Exploratory data analysis
11	16 th November	EDA ppt (business pt-of-view)
12	23 rd November	Model execution
13	30 th November	Final delivery

Data intake report

Name: Bank marketing dataset

Report date: 25th October 2022

Internship Batch: LISUM13: 30

Version: 2.0

Data intake by: Rania Tarek Fleifel

Data storage location: [Bank marketing dataset \(bank.zip, bank-additional.zip\)](#)

Tabular data details:

1) bank-additional-full.csv

Total number of observations	41188
Total number of files	1
Total number of features	21
Base format of the file	.csv
Size of the data	5698 KB
Unique identifier feature	No unique identifier
Dupe validation	12

2) bank_full.csv

Total number of observations	45211
Total number of files	1
Total number of features	17
Base format of the file	.csv
Size of the data	4502 KB
Unique identifier feature	No unique identifier
Dupe validation	No duplicates

3) bank-additional.csv

Total number of observations	4119
Total number of files	1
Total number of features	21
Base format of the file	.csv
Size of the data	570 KB
Unique identifier feature	No unique identifier

**Dupe validation**

No duplicates

4) bank.csv

Total number of observations	4521
Total number of files	1
Total number of features	17
Base format of the file	.csv
Size of the data	451 KB
Unique identifier feature	No unique identifier
Dupe validation	No duplicates

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Information about bank-additional-full.csv
Number of columns= 21
Number of entries= 41188.0
Size of file= 5698 KB
Number of duplicated entries= 12
Columns names are ['age', 'job', 'marital', 'education', 'default', 'housing', 'loan', 'contact', 'month', 'day_of_week', 'duration', 'campaign', 'pdays', 'previous', 'poutcome', 'emp.var.rate', 'cons.price.idx', 'cons.conf.idx', 'euribor3m', 'nr.employed', 'y']
#####

Information about bank-full.csv
Number of columns= 17
Number of entries= 45211.0
Size of file= 4502 KB
Number of duplicated entries= 0
Columns names are ['age', 'job', 'marital', 'education', 'default', 'balance', 'housing', 'loan', 'contact', 'day', 'month', 'duration', 'campaign', 'pdays', 'previous', 'poutcome', 'y']
#####

Information about bank-additional.csv
Number of columns= 21
Number of entries= 4119.0
Size of file= 570 KB
Number of duplicated entries= 0
Columns names are ['age', 'job', 'marital', 'education', 'default', 'housing', 'loan', 'contact', 'month', 'day_of_week', 'duration', 'campaign', 'pdays', 'previous', 'poutcome', 'emp.var.rate', 'cons.price.idx', 'cons.conf.idx', 'euribor3m', 'nr.employed', 'y']
#####

Information about bank.csv
Number of columns= 17
Number of entries= 4521.0
Size of file= 451 KB
Number of duplicated entries= 0
Columns names are ['age', 'job', 'marital', 'education', 'default', 'balance', 'housing', 'loan', 'contact', 'day', 'month', 'duration', 'campaign', 'pdays', 'previous', 'poutcome', 'y']
#####
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Git-hub Repo link: [Data science project-Bank Marketing Campaign](#)